I have 16 years of experience as an electromagnetic compatibility test and evaluation engineer on Naval aircraft. Over the past 5 years I have been performing research on portable electronic devices and the risk they pose to commercial aircraft at Carnegie Mellon University. This work is the subject of my doctoral thesis (due for release 2 May 2005). As part of this work I was given an FAA grant to study the in-flight RF environment. The FAA received that report on 30 October 2004. The report is titled, "In-Flight RF Spectrum Measurements of Commercial Aircraft Cabins." The authors are Bill Strauss and M. Granger Morgan. The work included studying the RF environment of 37 commercial flights.

In short, the findings of my research indicate that there is risk in allowing cellular telephone operation onboard commercial aircraft in-flight. There are a number of initiatives that need to be developed and deployed to reduce the risks, please refer to my article titled, "Everyday Threats to Aircraft Safety," in Issues in Science and Technology, Winter 2002-03. All of these initiatives will take time. In the meantime, limiting the use of electronics onboard is the only available method to ensure the near-term safety of the flying public.

A recent NASA technical memorandum has identified a specific cellular phone that produces interference in aircraft GPS, NASA/TM-2004-213001 titled, "Evaluation of a Mobile Phone for Aircraft GPS Interference," NASA Langley Research Center, Hampton, VA, March 2004. This report should also be considered.

Here are some points from my research for consideration.

1. Portable electronic devices (cellular telephones included) can and at times do cause electromagnetic interference in aircraft systems.
2. The occurrence rate of interference to aircraft systems is unknown. My data shows that it is on the order of a few incidents each month.
3. Some of the incidents are hazardous in nature. Previous work has shown that hazardous incidents do lead to accidents.
4. The in-flight RF environment onboard commercial aircraft is more active than previously believed and at levels capable of producing interference.
5. The appropriate management and oversight tools are not in place to assess if a change in cellular policy ultimately has any negative effects.
6. The current competitive pressure on air carriers has severely limited their ability to devote the appropriate resources to the issue.

I would be honored to discuss this issue with you further including providing a draft of my thesis, if you feel that it would be helpful.

Regards,

Bill Strauss